Product Guide

UJV500-160

eco FLEXIBLE UV INK

LED UV

With LUS-200 Ink

3M™ MCS™ Warranty

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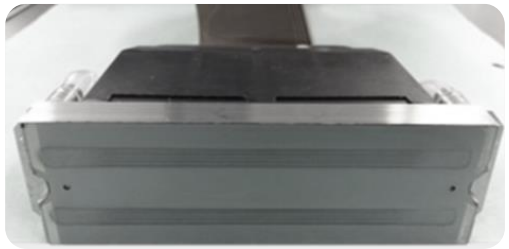
UJV500-160 Features

- **Environment-friendly**
  - Generates no ozone
  - Uses LED-UV curing system
  - Long life LED lamps
  - Low VOC inks
  - Nickel-free inks

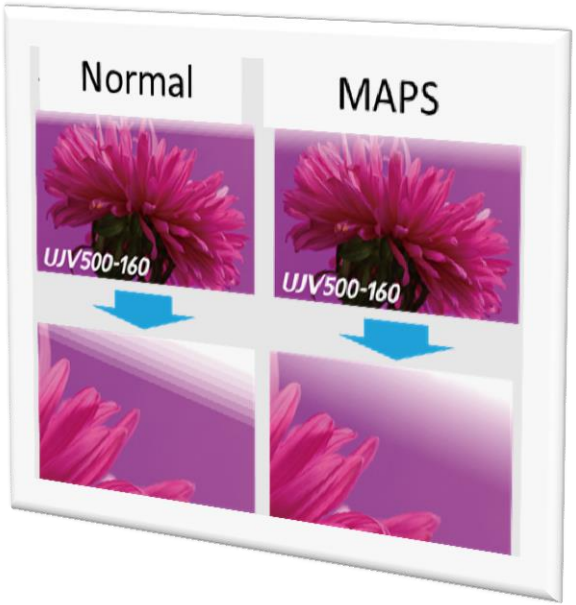
- **High productivity**
  - High speed printing of 60m²/h
  - LED-UV Curing Unit supports high speed printing

- **High image quality**
  - Variable drop size
  - Performs high quality printing



UJV500-160 Features

- **MAPS2**
  - Mimaki Advanced Pass System
  - Reduces the chance of banding



- **High reliability**
  - Nozzle Recovery System ensures an stable quality
  - Vertical Tension Take-up System

- **Increases the work efficiency**
  - The ink is cured immediately after printing
  - Drying time is reduced to an absolute minimum

UJV500-160 Features

- Auto media thickness detection
- Auto head height adjustment
- Media jam sensor
- Vertical Tension Take-up System
- Automatic cutter in the Y-direction
- Nozzle recovery system
- Allows refilling of ink during printing

Ecological

- **Environmental friendly LED-UV curing unit which supports high speed printing**
  - Little VOC (Volatile Organic Compound)
  - Ozone-free
  - Odourless
  - No need for an extra ventilation system

- **Reduces power consumption and cost**
  - LED-UV units generate less heat
  - Thinner heat sensitive media's can be printed
  - Lamps turn on, only at the printed part
  - Energy-efficient lamp reduces the total cost
  - No energy needed for warming-up and cooling-down the lamp

Ecological

- **The reduction of heat impact**
  - The metal halide lamp generates also infrared rays other than UV rays resulting in high temperature on the media
  - Metal halide lamps can cause deformation of media
  - LED UV lamps, allowing printing on difficult (cheaper) media

- **The improvement of productivity**
  - Long-lasting UV-lamps (about 5000h or more)
  - Less maintenance
  - Metal halide lamp lasts for about 700-1000 hours
  - Metal halide lamps have an warm up and cool down time

    LED can be turned on and off immediately

System configuration

PC

Output

USB2.0 cable (5m)

Corporate network
(LAN cable)

Ai Ps CorelDRAW X6

Standard for the UJV500-160

Printer unit
Ink supply unit
Auto media feed device
Auto media take-up device
RasterLink6
Supported formats:
EPS、PS、TIFF、JPEG、
BMP

Necessary supplies/products for printer installation

8 Ink bottles
Supported ink type: LUS 150 or LUS 200

PC controller for RasterLink 6
5m USB 2.0 cable

LUS-200 ink features

- **LUS-200 LED UV Ink**
  - Stretchable LED UV Ink
  - MIMAKI worked with 3M and developed the new ink LUS-200 with the 3M™MCS™ Warranty
  - Printed ink stretches up to 200%, allowing for applying the media onto curved surfaces, such as vehicle wraps without cracking the printed image
  - Outdoor durability is guaranteed by 3M™MCS™ Warranty
  - Stretches, up to 200%, after printing when heated by an dryer (The temperature of the dryer for vehicle wraps)
  - Less tackiness then other flexible inks

LUS-200 UV inks

- **Eco friendly ink supply bottles of 2L**
  - LUS-200 inks are supplied in 1L bottle

Ink Station MK III

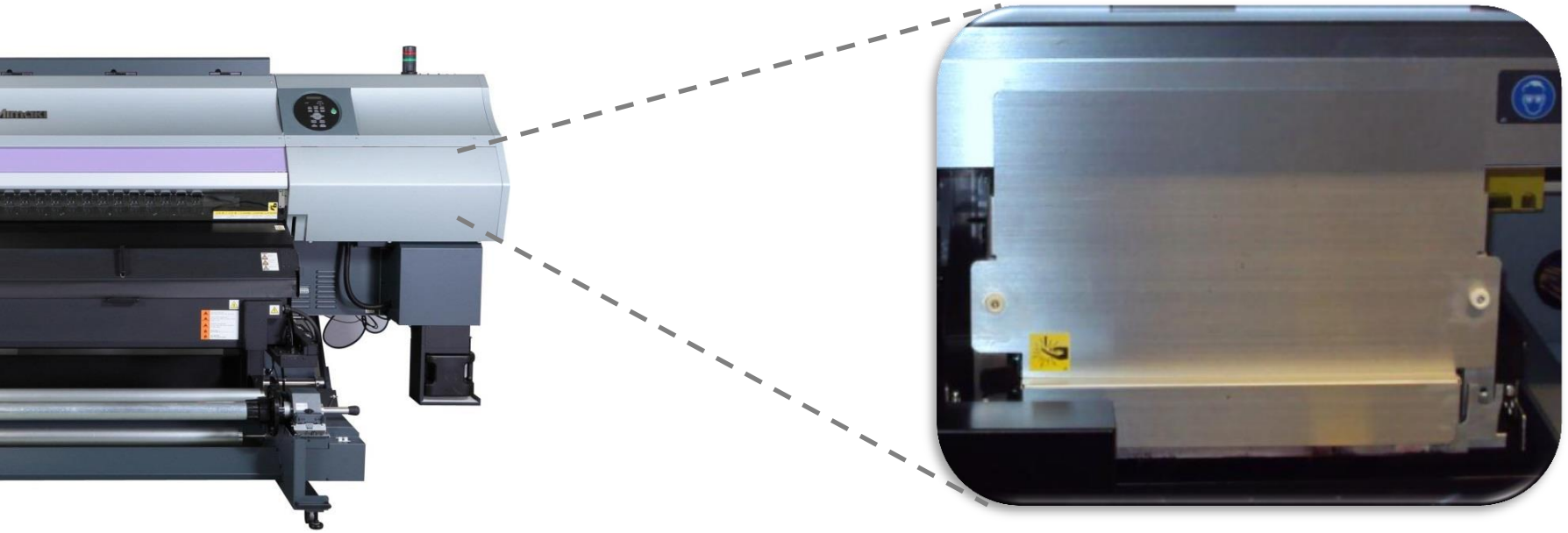
3M™ MCS™ Warranty

- **About 3M™MCS™ Warranty**
  - 3M warrants that printed products which was made entirely by using media, laminate films, inks, and printers that 3M specify, and which was installed appropriately in accordance with 3M's instruction, will perform satisfactorily for a certain period.
  - Tarpaulin (Banner material) is not ideal for LUS200 ink.

3M™ MCS™ Warranty

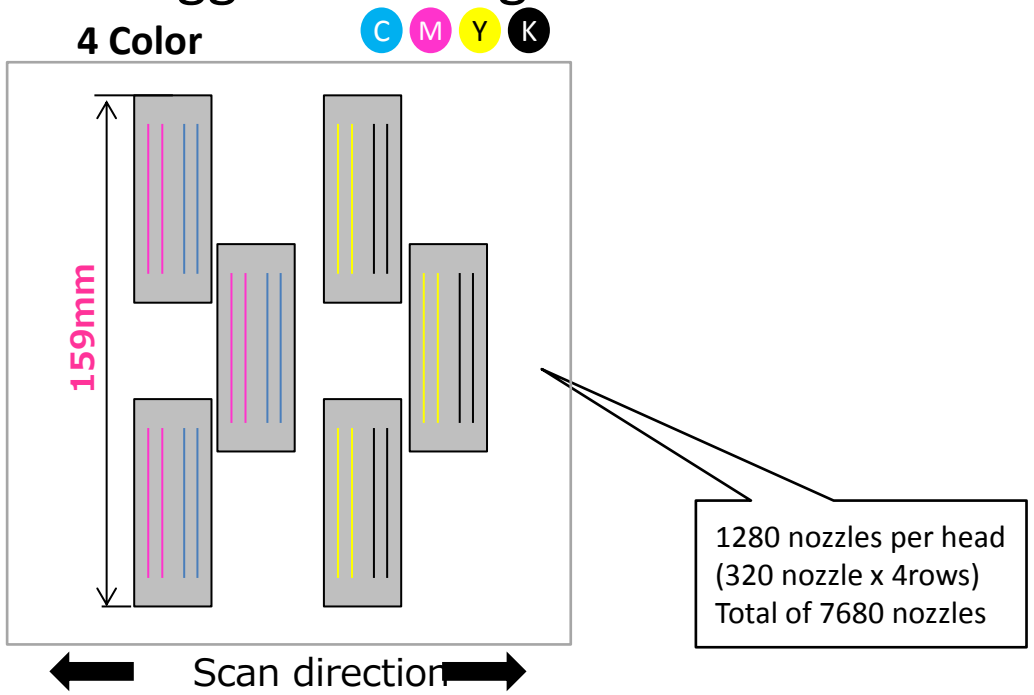
High Productivity & Image quality

- **Newly developed printhead**
  - The new printhead enables high speed printing
- **6-printheads placed in a staggered configuration**
  - Total printhead width of 159mm



High Productivity & Image quality

- **New developed print head**
  - An total of 6 print heads
  - Placed in a 3 row staggered configuration



High Productivity & Image quality

- **MAPS 2 (Mimaki Advanced Pass System 2)**
  - MAPS 2 is newly added.
    - The banding is reduced by dispersing ink drops between the passes
    - MAPS 2 also prevents uneven color when printing solid colors
- **The recommended setting of MAPS2 is AUTO**
  - Manual adjustment is possible, when banding and/or uneven colors are not solved
  - Manually the pattern and the smoothing can be adjusted
  - When AUTO is selected, the setting is automatically done according to print mode

MAPS2: AUTO

MAPS2: OFF

High Productivity & Image quality

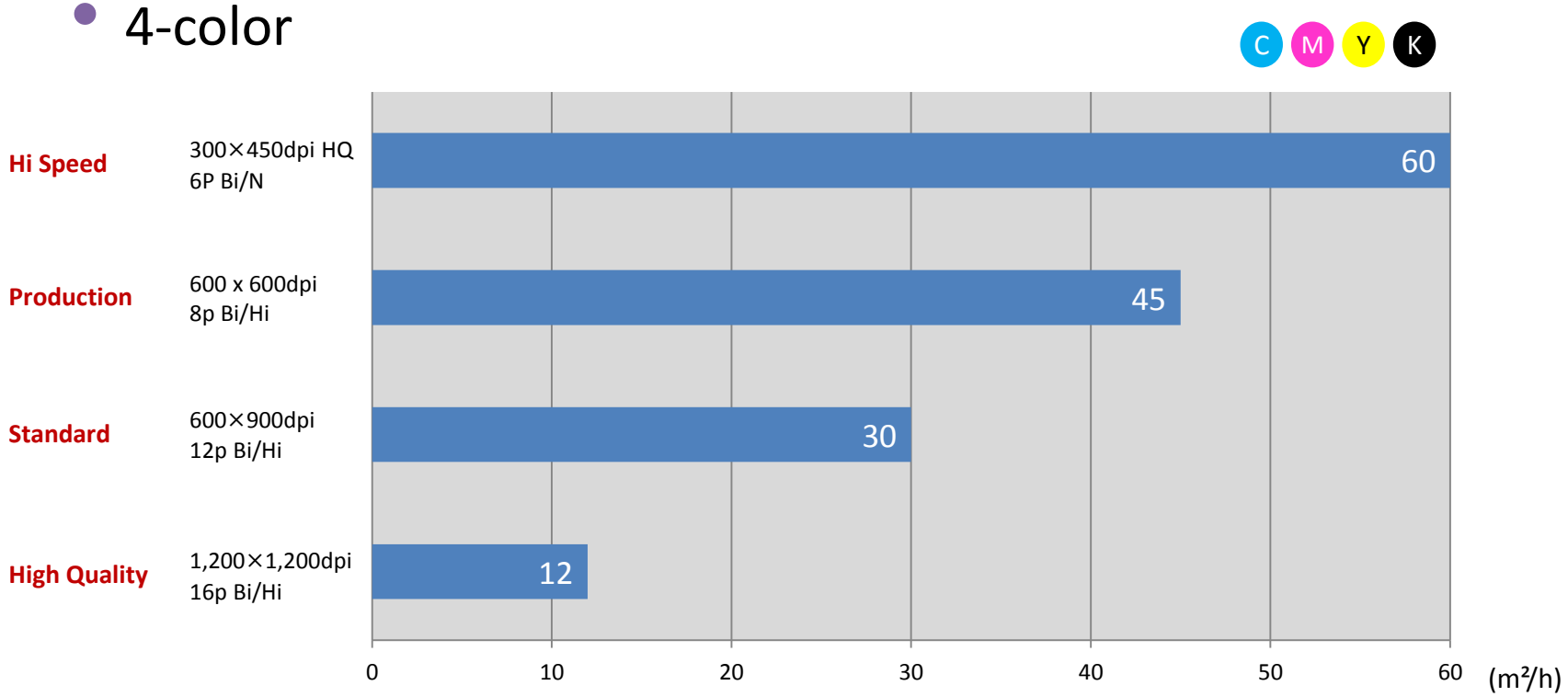
- **Variable drop size**
  - The variable dot, printing in 3 different dot sizes of large, medium and small
  - Realizes the high image printing with the smooth gradation
  - Allowing to print Small characters sharp without an granular appearance

Variable dot

Normal dot

High Productivity & Image quality

- **Print Speed**
  - 4-color

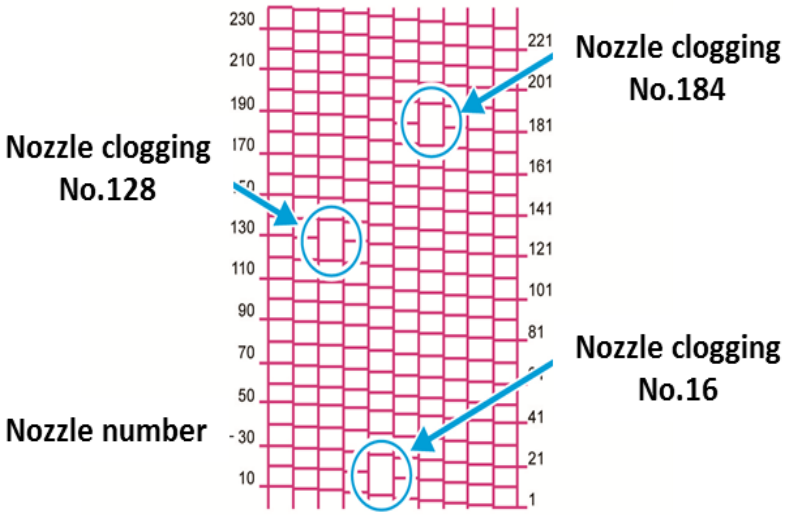


Depending on the settings in the firmware, the print speed may vary

High Productivity & Image quality

- **The nozzle recovery system**
  - Continuous printing operation

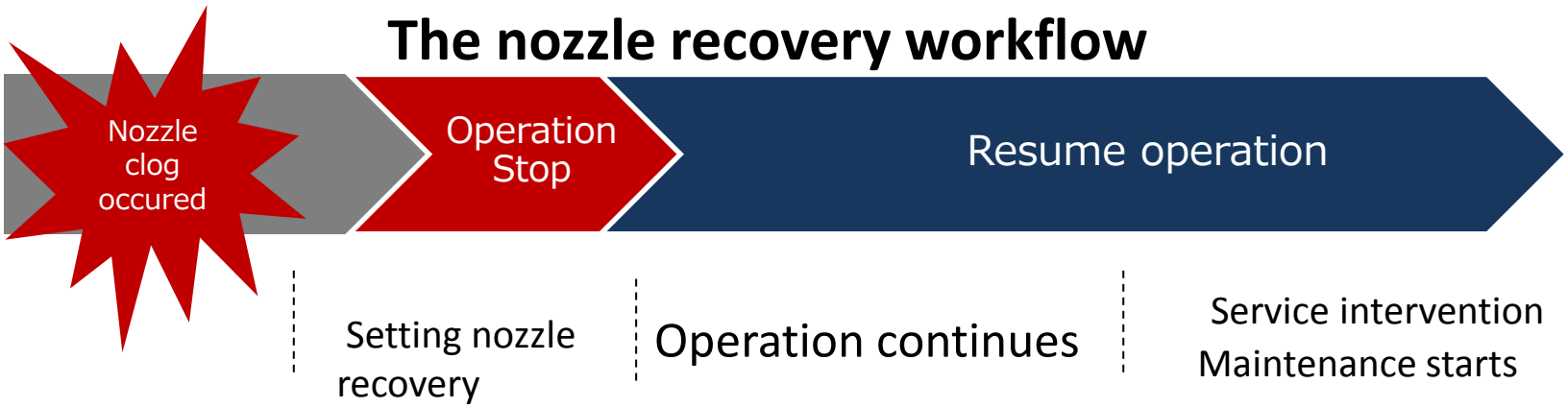
The example of registering clogged nozzles



Registration number	The number of the nozzle to be recovered	State
1	16	Recovered
2	128	Recovered
3	184	Recovered
4	OFF	Unregistered
5	OFF	Unregistered

High Productivity & Image quality

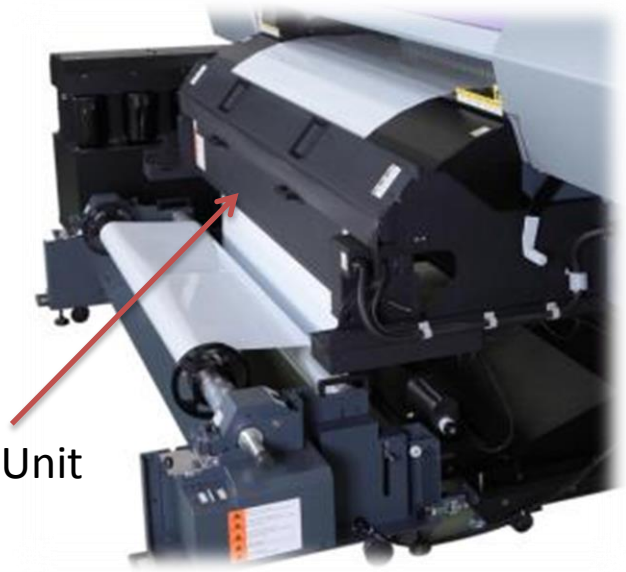
- **The nozzle recovery system**



- 10 nozzles can be registered per 1 nozzle line
- The nozzle recovery system does not have influence on the printing speed
- A temporary measure in order to continue the operation
- In the low number passes modes the nozzle recovery system is inactive

Post Cure Unit

- Post Cure Unit (standard feature) is an secondary curing unit which exposes UV light after printing
- Making sure that the ink is fully cured and ready for take-up
- High reliable
- Guaranties fully cured prints when printing with high speeds



Vertical Tension Take-up System

- **New developed**
  - Enables high reliability
  - Easy accessible and also easy to operate
  - Smooth media feeding, by pulling the media down in the vertical direction
  - Can handle roll's with a maximum diameter of 300mm
  - Maximum media roll weight of 60kg

Vertical Tension Take-up System

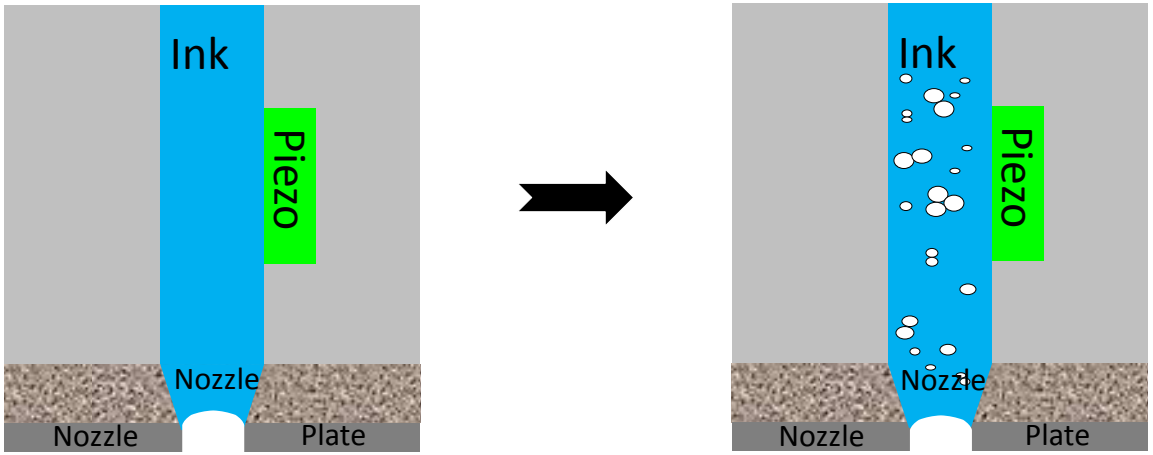
Degassing module, MDM

- **Conventional inks**
  - Are degassed during the ink packaging process
  - Increasing the production cost

- **The UJV500-160 degasses the ink for you**
  - Lower ink production cost of the inks
  - Also un-degassed inks can be used
  - Service intervention on yearly basis is needed

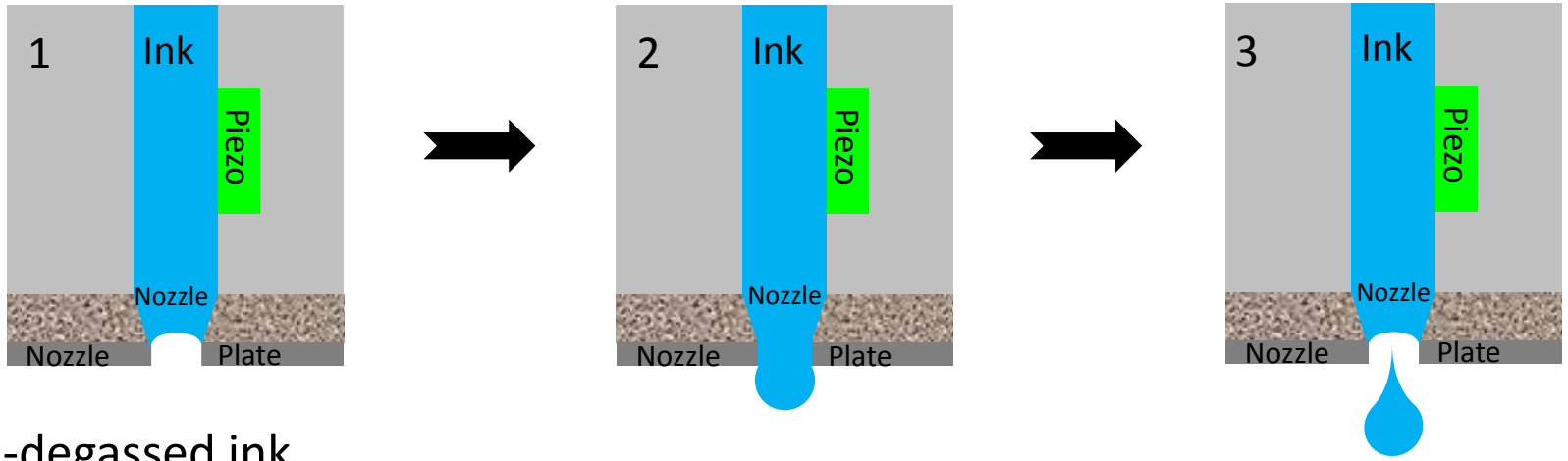
What is degassed ink?

- **Degassing**
  - Is to remove the air that is dissolved in the ink
  - The air in the inks contains nitrogen and oxygen
  - The air appears in the ink as bubbles, caused by the change of pressure or temperature

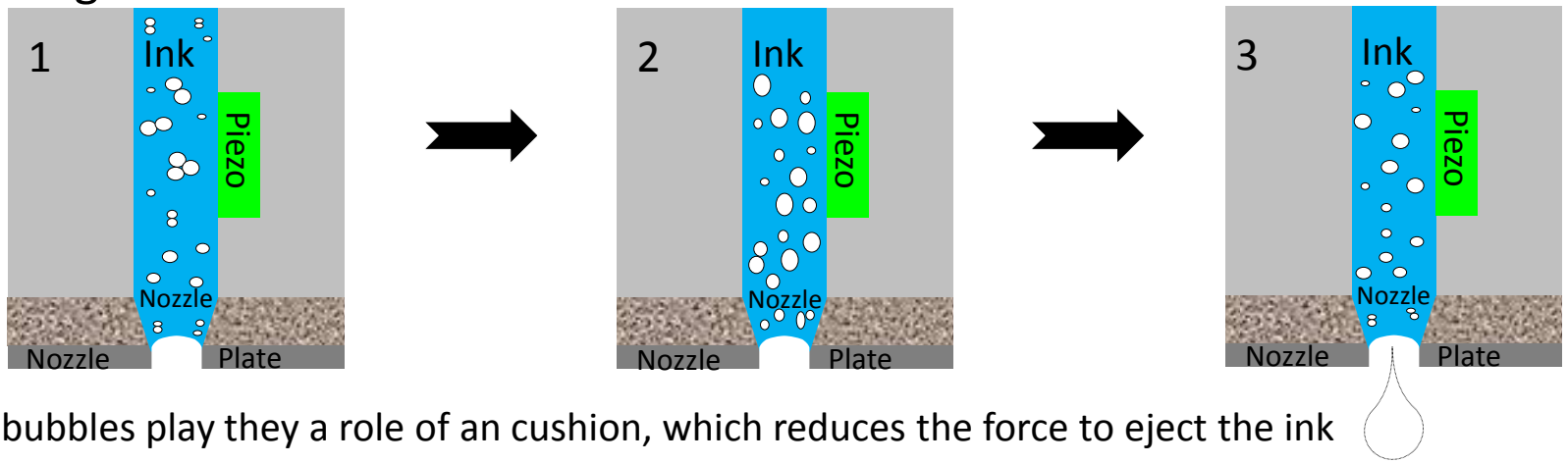


The effect of degassed ink

Degassed ink



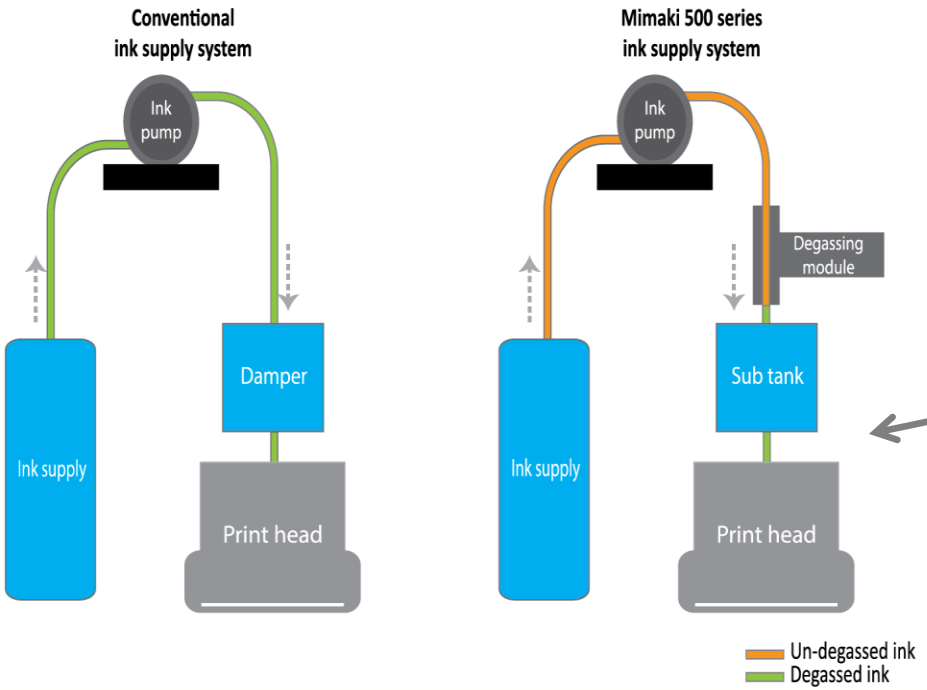
Un-degassed ink



Air bubbles play they a role of an cushion, which reduces the force to eject the ink

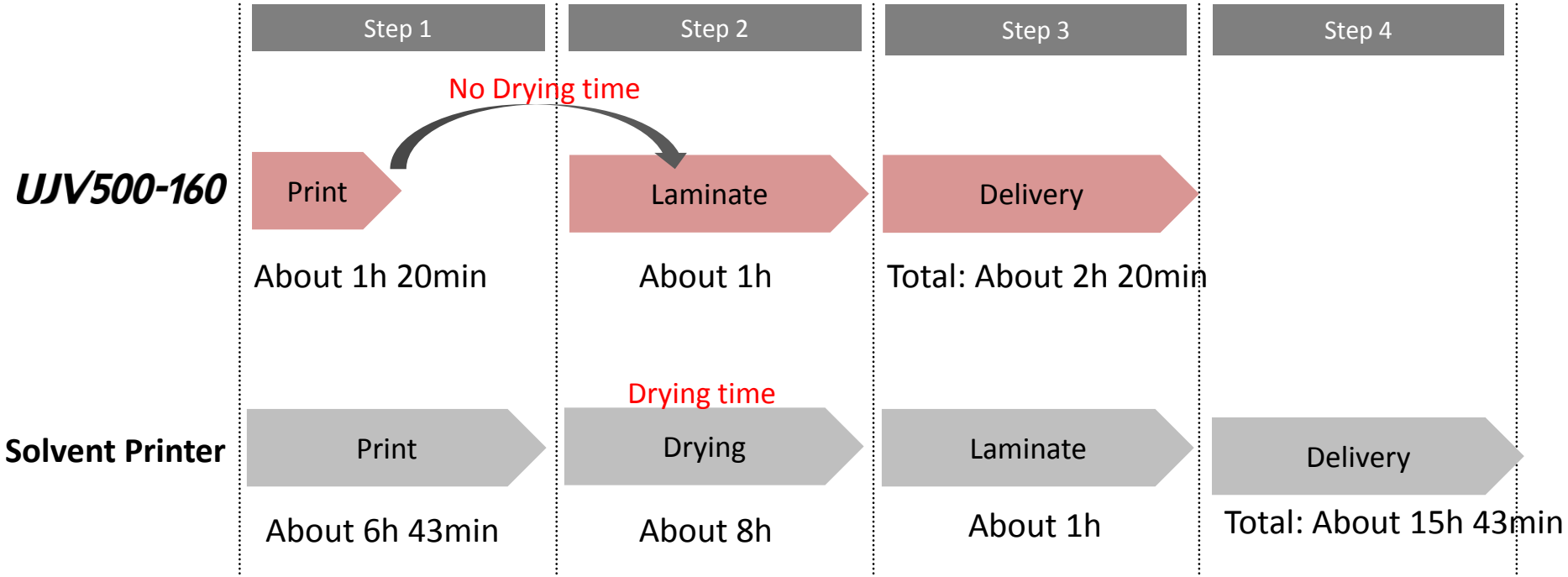
Degassing module, MDM

- **MDM = Mimaki Degassing Module**



Workflow Comparison

- **Comparison with solvent printer**
  - Condition: 1.6m x 50m roll media (80m²).
    The length of time before delivery is compared
  - UJV500-160 ⇒ 600x900dpi, 6P, Bi/Hi (60m²/h)
  - Solvent printer ⇒ 540x1080dpi, 6P, Bi/Hi (11,9m²/h)



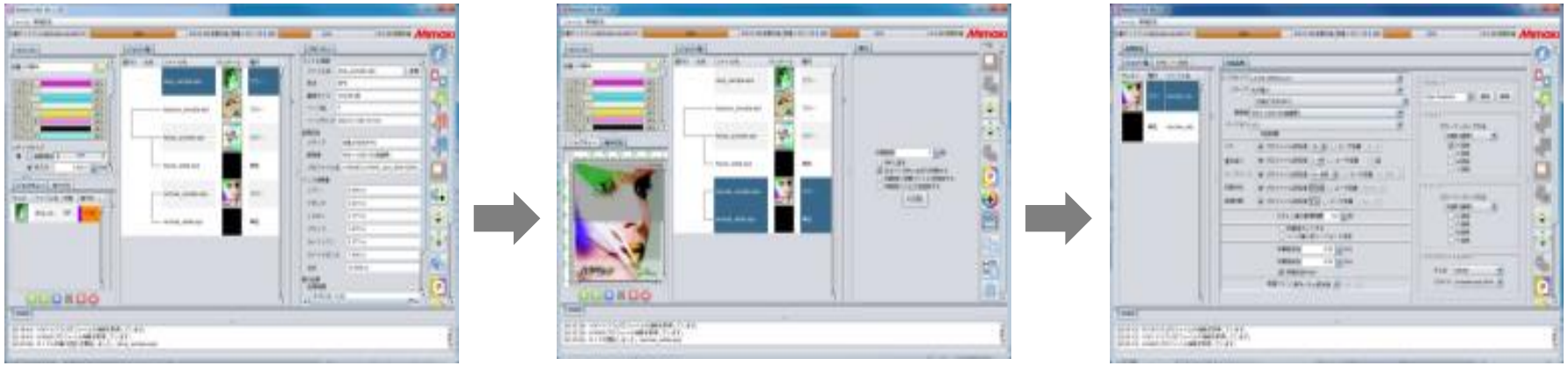
The Software RIP

RasterLink6

- **New RasterLink 6 is Simplicity, and Usability**
  - New useful functions
  - Now anyone can have the more beautiful and more sophisticated output
  - This is “Everyone’s RIP software”

RasterLink 6

- **The easy intuitive operation**



1 The basic configuration settings are displayed with icon enabling intuitive manipulation

2 The related settings are gathered up in one screen
Easy overview
The mode which is used frequently can be registered
With this function, printing with the minimum operation is possible

3 The progress of the job is visually confirmable on the main screen

RasterLink 6

Rasterlink6

- **New useful features**
  - The merge print function, corresponding to variable data
  - Notification by e-mail
  - Inform the printing situation, such as the used amount of ink, the estimated printing time

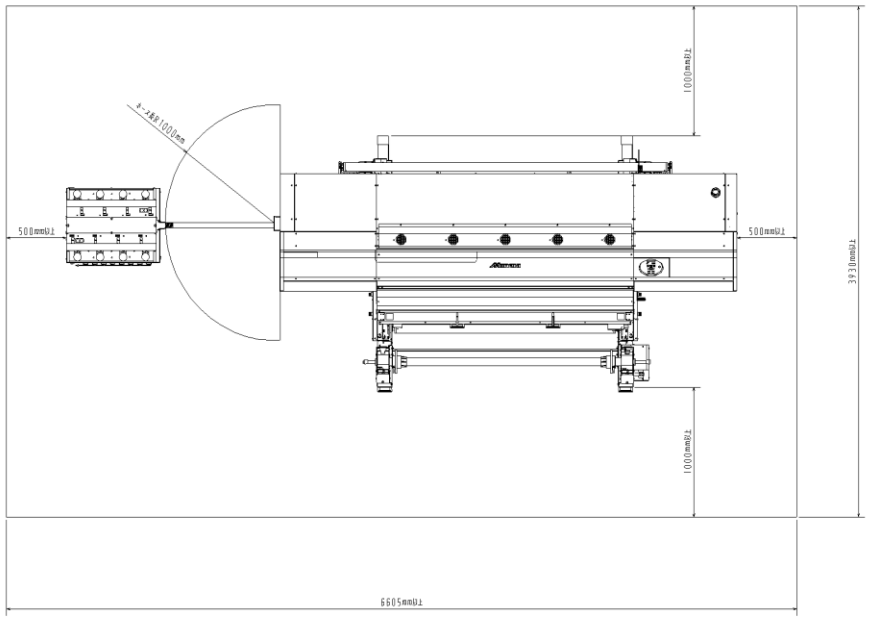
- **Correspond with the Web Update**
  - The web update is available as well as RasterLinkPro5 which is received well
  - The program update and the profile download can be done through the web

UJV500-160 Specification

UJV500-160	
Print head	On demand piezo head
UV Lamp	LED-UV
UV Lamp Life-time	5000 hours or more
Resolution	300dpi, 600dpi, 900dpi, 1200dpi
Maximum print width	1610mm
Minimum print width	297mm
Maximum media width	1620mm
Media thickness	0,1mm - 1mm (Transport thickness)
Maximum outer diameter (take-up)	Φ300mm or less
Roll weight	60kg or less
Core diameter	2 inch / 3inch
Absolute accuracy	Error of less than +/- 0,3% of distance traveled, or +/- 0,3 mm, whichever is better
Reproducibility	Error of less than +/- 0,1% of distance traveled, or +/- 0,2 mm, whichever is greater
Print gap	1,5mm - 7mm The gap can be set by user (Automatic recognition of media thickness)
Heater	Pre/Print/Post (Independent control)
Ink type	LUS-200
Color	C,M,Y,K
Ink supply	1L Bottle
Ink volume	2L
Interface	USB2.0
Power supply	AC200 - 240V 50/60Hz, less than 7.2kvA
Installment environment	Temperature :15°C - 30°C, Humidity: 30% - 65RH%
Dimensions	3852mm (W) x 1977mm (D) x 1690mm (H)

Installation Environment

Equipment	Width	Depth	Height	Weight
UJV500-160	3852mm	1977mm	1690mm	800kg
Ink Station	780mm	570mm	830mm	30kg



- **About installation space**

- Do not install the machine on a weak surface floor
- Make sure to use in a ventilated environment.
- Environmental temperature 15 to 30 degrees Celsius
- Do not install on carpets etc.
- Ink can odor. Please use the machine in a well-ventilated environment
- The installation space for PC is not included

UJV500-160

Revision History

Version	Date	Content	Drafter
0.9	21/05/2013	Draft version issued	PM Emea
1.0	21/03/2014	Final version, completion all information	PM Emea

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